

B. In the Claims

Please cancel claims 2 to 6, 8 to 9, 12 to 18, 20 to 27, 30 to 35, 37 to 44, 47 to 52, 54 to 61, 64 to 69, 71 to 78, 81 to 86, 88 to 102 without prejudice.

Upon entry of the present amendment, the claims will stand as follows in the present application:

Please amend claims 1, 7, 10, 11, 19, 28, 29, 36, 45, 46, 53, 62, 63, 70, 79, 80 and 87 as follows:

1. (Currently Amended) A method of enhancing collateral blood vessel formation ~~which comprises the step of in a subject comprising~~ directly administering to ~~a desired sites in~~ heart or limb tissue a composition comprising an effective amount of autologous bone marrow aspirate to induce collateral blood vessel formation in the tissue.

Claims 2-6 (cancelled)

7. (Currently Amended) The method of Claim 1, wherein the autologous bone marrow has been stimulated ex vivo by contact with at least one angiogenic cytokine.

Claims 8-9 (cancelled)

10. (Currently Amended) The method of Claim 7, wherein the autologous bone marrow has been transfected with at least one vectors carrying relevant comprising an effective amount of a gene[[s]] that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

11. (Currently Amended) The method of Claim 10, wherein the ~~autologous bone marrow has been transfected with a~~ vector is a plasmid vector or an adenoviral vector, ~~or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other transgene demonstrated to be effective in enhancing the capacity of bone marrow to induce angiogenesis.~~

Claims 12-18 (cancelled)

19. (Currently Amended) A method of promoting the development of newly implanted myocardial cells in a subject comprising ~~which comprises the step of~~ directly administering an effective amount of autologous bone marrow aspirate to induce development of newly implanted myocardial cells in the subject.

Claims 20-27 (cancelled)

28. (Currently Amended) The method of Claim ~~[[25]]~~ 19, wherein the autologous bone marrow has been transfected with at least one ~~vectors carrying relevant~~ comprising an effective amount of a gene[[s]] that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

29. (Currently Amended) The method of Claim 28, wherein the ~~autologous bone marrow has been transfected with~~ vector is a plasmid vector or an adenoviral vector, ~~or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other transgene demonstrated to be effective in enhancing the capacity of bone marrow to induce angiogenesis.~~

Claims 30-35 (cancelled)

36. (Currently Amended) A method of improving the electrical conductivity of the heart of a patient with cardiac electrical pathway impairment, which comprises ~~the step of~~ directly administering an effective amount of autologous bone marrow aspirate to myocardium of the patient to improve electrical conductivity therein as compared with non-administration of the autologous bone marrow aspirate.

Claims 37-44 (cancelled)

45. (Currently Amended) The method of Claim ~~[[42]]~~ 36, wherein the autologous bone marrow has been transfected with at least one vectors carrying relevant comprising an effective amount of a gene[[s]] that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

46. (Currently Amended) The method of Claim 45, wherein the ~~autologous bone marrow has been transfected with~~ vector is a plasmid vector or an adenoviral vector, or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other transgene demonstrated to be effective in enhancing the capacity of bone marrow to induce angiogenesis.

Claims 47-52 (cancelled)

53. (Currently Amended) A method of enhancing myocardial function in a patient with impaired myocardial function, which comprises ~~the step of~~ directly administering an effective amount of autologous bone marrow aspirate to myocardium of the patient to improve function of the myocardium as compared with non-administration of the autologous bone marrow aspirate.

Claims 54-61 (cancelled)

62. (Currently Amended) The method of Claim ~~[[59]]~~53, wherein the autologous bone marrow has been transfected with at least one vectors carrying relevant comprising an effective amount of a gene[[s]] that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

63. (Currently Amended) The method of Claim 62, wherein the ~~autologous bone marrow has been transfected with~~ vector is a plasmid vector or an adenoviral vector, or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other transgene demonstrated to be effective in enhancing the capacity of bone marrow to induce angiogenesis.

Claims 64-69 (cancelled)

70. (Currently Amended) A method of treating an atrial or ventricular condition in the heart of a patient, which comprises ~~the step of~~ directly administering an effective amount of autologous bone marrow aspirate to myocardium of the patient to improve the atrial or ventricular function of the heart as compared with non-administration of the autologous bone marrow.

Claims 71-78 (cancelled)

79. (Currently Amended) The method of Claim ~~[[76]]~~70, wherein the autologous bone marrow has been transfected with at least one vectors carrying relevant comprising an effective amount of a gene~~[[s]]~~ that expresses HIF1, EPAS1, MCP-1, GM-CSF, or a combination thereof.

80. (Currently Amended) The method of Claim 79, wherein the ~~autologous bone marrow has been transfected with~~ vector is a plasmid vector or an adenoviral vector, ~~or any other vector demonstrated to be effective for gene transfer, carrying the HIF-1 or EPAS1 transgene, or any other transgene demonstrated to be effective in enhancing the capacity of bone marrow to induce angiogenesis.~~

Claims 81-86 (cancelled)

87. (Currently Amended) A composition for the treatment of a cardiac or myocardial condition, which composition comprises an effective amount of autologous bone marrow; ~~wherein the cardiac or myocardial condition is treated~~ aspirate that has been transfected with at least one vector comprising a gene that expresses HIF-1 or EPAS1.

Claims 88-102 (cancelled)